IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Bruce B. Randolph, Richard L. Anderson and Robert B. Eldridge

Prior Application: 08/448,697
Examiner: N. Nguyen
Group Art Unit: 1103

For: **TRANSPORTATION OF HYDROGEN FLUORIDE**

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Pursuant to 37 C.F.R. 1.53(b), Applicants submit the following amendments.

In the Claims

Please cancel claims 82 – 91 without prejudice.

Clean Copy of Claims - In compliance with new 37 C.F.R.§1.121(c), please find beginning on the next page, amended claims. Please substitute and enter these claims for the pending claims with the same number.

Clean version of the claims:

1. (amended) A method for the transportation of hydrogen fluoride from a point of origin to a destination point, said method comprising the steps of:

adding at said point of origin a sulfone to the hydrogen fluoride to form a liquid mixture;

thereafter transporting by transportation means for transferring said liquid mixture from said point of origin to said destination point, wherein said transportation means comprises a closed volume selected from the group consisting of tank cars, tank trucks and portable vessels, and wherein said liquid mixture fills less than the entire volume of said closed volume to form a vapor space therein and wherein the percent partial pressure of hydrogen fluoride in said vapor space is less than 100 molar percent and wherein the pressure within said vapor space is less than 30 psig.

2. (amended) A method as recited in claim 1, further comprising: separating at said destination point said liquid mixture into a sulfone phase and a hydrogen fluoride phase.

7. (amended) A method for handling and transportation of hydrogen fluoride, said method comprising the step of:

receiving at a destination point a volume of a liquid mixture comprising hydrogen fluoride and sulfone by way of transportation means for

transferring said volume from a point of origin to said destination point, said transportation means comprises a closed volume selected from the group consisting of tank cars, tank trucks and portable vessels, and wherein said liquid mixture fills less than the entire volume of said closed volume to form a vapor space therein and wherein the percent partial pressure of hydrogen fluoride in said vapor space is less than 100 molar percent and wherein the pressure within said vapor space is less than 30 psig.

8. (amended) A method as recited in claim 7, further comprising:

separating at said destination point said liquid mixture into a sulfone phase and a hydrogen fluoride phase.

9. (amended) A method as recited in claim 8, further comprising:

returning said sulfone phase to said point of origin; and

adding at said point of origin said sulfone phase to hydrogen fluoride to form said liquid mixture.

10. (amended) A method as recited in claim 9 wherein said liquid mixture includes a weight ratio of sulfone to hydrogen fluoride in the range from about 1:100 to about 100:1.

13. (amended) A method for handling and transportation of hydrogen fluoride, said method comprising the step of:

transporting by transportation means for transferring a liquid mixture comprising hydrogen fluoride and a sulfone from a point of origin to a destination point, said transportation means comprises a closed volume selected from the group consisting of tank cars, tank trucks and portable vessels, and wherein said liquid mixture fills less than the entire volume of said closed volume to form a vapor space therein and wherein the percent partial pressure of hydrogen fluoride in said vapor space is less than 100 molar percent and wherein the pressure within said vapor space is less than 30 psig.

14. (amended) A method as recited in claim 13 wherein said liquid mixture includes a weight ratio of sulfone to hydrogen fluoride in the range of from about 1:100 to about 100:1.

16. (amended) A method for the transportation of hydrogen fluoride from a point of origin to a destination point, said method comprising the steps of:

adding at said point of origin a sulfone to the hydrogen fluoride to form a liquid mixture; and

thereafter transporting said liquid mixture by transportation means for transferring a discrete volume of said liquid mixture from said point of origin to said destination point.

17. (amended) A method as recited in claim 16 wherein said transportation means comprises a closed volume selected from the group consisting of tank cars, tank trucks, and portable vessels including tanks, drums, barrels and bottles, and wherein said liquid mixture fills less than the entire volume of said closed volume to form a vapor space therein and wherein the percent partial pressure of hydrogen fluoride in said vapor space is less than 100 molar percent and wherein the pressure within said vapor space is less than 30 psig.

23. (amended) A method as recited in claim 22 wherein said liquid mixture includes a weight ratio of sulfone to hydrogen fluoride in the range of from about 1:100 about 100:1.

33. (amended) A method as recited in claim 32 wherein said liquid mixture includes a weight ratio of sulfone to hydrogen fluoride in the range of from about 1:100 about 100:1.

Marked Up Version of the Claims:

1. (amended) A method for the transportation of hydrogen fluoride from a point of origin to a destination point, said method comprising the steps of:

adding at said point of origin a sulfone to the hydrogen fluoride to form a liquid mixture;

thereafter transporting by transportation means for transferring said liquid mixture from said point of origin to said destination point, wherein said transportation means comprises a closed volume [is] selected from the group consisting of tank cars, tank trucks and portable vessels, and wherein said liquid mixture fills less than the entire volume of said closed volume to form a vapor space therein and wherein the percent partial pressure of hydrogen fluoride in said vapor space is less than 100 molar percent and wherein the pressure within said vapor space is less than 30 psig.

2. (amended) A method as recited in claim 1, further comprising:

separating at said destination point said liquid mixture into a sulfone phase and a hydrogen fluoride phase.

7. (amended) A method for handling and transportation of hydrogen fluoride, said method comprising the step of:

receiving at a destination point a volume of a liquid mixture comprising hydrogen fluoride and sulfone by way of transportation means for

transferring said volume from a point of origin to said destination point, said transportation means comprises a closed volume [is] selected from the group consisting of tank cars, tank trucks and portable vessels, and wherein said liquid mixture fills less than the entire volume of said closed volume to form a vapor space therein and wherein the percent partial pressure of hydrogen fluoride in said vapor space is less than 100 molar percent and wherein the pressure within said vapor space is less than 30 psig.

8. (amended) A method as recited in claim 7, further comprising:

separating at said destination point said liquid mixture into a sulfone phase and a hydrogen fluoride phase.

9. (amended) A method as recited in claim 8, further comprising:

returning said sulfone phase to said point of origin; and

adding at said point of origin said sulfone phase to hydrogen fluoride to form said liquid mixture.

10. (amended) A method as recited in claim 9 wherein said liquid mixture includes a weight ratio of sulfone to hydrogen fluoride in the range from about 1:100 to about 100:1.

13. (amended) A method for handling and transportation of hydrogen fluoride, said method comprising the step of:

transporting by transportation means for transferring a liquid mixture comprising hydrogen fluoride and a sulfone from a point of origin to a destination point, said transportation means comprises a closed volume [is] selected from the group consisting of tank cars, tank trucks and portable vessels, and wherein said liquid mixture fills less than the entire volume of said closed volume to form a vapor space therein and wherein the percent partial pressure of hydrogen fluoride in said vapor space is less than 100 molar percent and wherein the pressure within said vapor space is less than 30 psig.

14. (amended) A method as recited in claim 13 wherein said liquid mixture includes a weight ratio of sulfone to hydrogen fluoride in the range of from about 1:100 to about 100:1.

16. (amended) A method for the transportation of hydrogen fluoride from a point of origin to a destination point, said method comprising the steps of:

adding at said point of origin a sulfone to the hydrogen fluoride to form a liquid mixture; and

thereafter transporting said liquid mixture by transportation means for transferring a discrete volume of said liquid mixture from said point of origin to said destination point.

17. (amended) A method as recited in claim 16 wherein said transportation means comprises a closed volume selected from the group consisting of tank cars, tank trucks, and portable vessels including tanks, drums, barrels and bottles, and wherein said liquid mixture fills less than the entire volume of said closed volume to form a vapor space therein and wherein the percent partial pressure of hydrogen fluoride in said vapor space is less than 100 molar percent and wherein the pressure within said vapor space is less than 30 psig.

23. (amended) A method as recited in claim 22 wherein said liquid mixture includes a weight ratio of sulfone to hydrogen fluoride in the range of from about 1:100 about 100:1.

33. (amended) A method as recited in claim 32 wherein said liquid mixture includes a weight ratio of sulfone to hydrogen fluoride in the range of from about 1:100 about 100:1.

In the Specification

Clean Copy of Specification Amendments - In compliance with new 37 C.F.R.§1.121(b), please find beginning on the next page, clean amended paragraphs. Please substitute and enter the following amended paragraphs for the current corresponding paragraphs.

Page 1, Paragraph 1: (amended)

This application is a division of application serial number 08/448,697, filed May 24, 1995 which is a continuation-in-part of application serial number 08/234,453, filed April 28, 1994.

Remarks

This application is submitted in response to the final restriction requirement mailed September 30, 1996 restricting the prior parent application to multiple inventions. This application is directed to non-elected claims of invention Group I.

In the specification, a cross reference to the prior application has been added. In the claims, claims 82 – 91 have been cancelled without prejudice. Also, support for the amendments to claims 1, 2, 7 – 10, 13, 14, 16, 17, 23, and 33 can be found in originally filed claims 82 – 91.

Applicants respectfully request an early notice of allowance.

Respectfully submitted

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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231, on January 11, 2002.
(Date)

Jeffrey R. Anderson
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